

I Claim:

1. A prosthesis to replace all or a portion of a caudal portion of a natural facet joint on a vertebral body comprising

5 a prosthesis body accommodating fixation to the vertebral body at or near a pedicle and without support by a lamina, and

an artificial facet joint structure carried by the prosthesis body adapted and configured to replace all  
10 or a portion of a caudal portion of a natural facet joint.

2. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
15 process of a caudal portion of a natural facet joint.

3. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
process of a caudal portion of a natural facet joint  
20 after removal of at least some of a lamina from the  
vertebral body.

4. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
is adapted and configured to replace a natural articular  
25 process of a caudal portion of a natural facet joint  
after removal of at least part of a mamillary process  
from the vertebral body.

5. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
30 is adapted and configured to replace a natural articular  
process of a caudal portion of a natural facet joint  
after removal of at least part of a transverse process  
from the vertebral body.

6. A prosthesis according to claim 1  
35 wherein the artificial facet joint structure

is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint after removal of at least part of a pedicle from the vertebral body.

5           7. A prosthesis according to claim 1  
              wherein the artificial facet joint structure  
              is adapted and configured to replace a natural articular  
              process of a caudal portion of a natural facet joint  
              after removal of at least some of the natural articular  
10      process from the vertebral body.

15      8. A prosthesis according to claim 1  
              wherein the artificial facet joint structure  
              is adapted and configured to replace a natural articular  
              process of a caudal portion of a natural facet joint  
              after removal of at least some of the natural articular  
              process and of at least some of a lamina from the  
              vertebral body.

20      9. A prosthesis according to claim 1  
              wherein the artificial facet joint structure  
              is adapted and configured to replace a natural articular  
              process of a caudal portion of a natural facet joint  
              after removal of at least some of the natural articular  
              process and of at least some of a mamillary process from  
              the vertebral body.

25      10. A prosthesis according to claim 1  
              wherein the artificial facet joint structure  
              is adapted and configured to replace a natural articular  
              process of a caudal portion of a natural facet joint  
              after removal of at least some of the natural articular  
              process and of at least part of a transverse process from  
              the vertebral body.

30      11. A prosthesis according to claim 1  
              wherein the artificial facet joint structure  
              is adapted and configured to replace a natural articular  
              process of a caudal portion of a natural facet joint

after removal of at least some of the natural articular process and of at least part of a pedicle from the vertebral body.

12. A prosthesis according to claim 1  
5       wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and  
          wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the  
10      vertebral body.

13. A prosthesis according to claim 1  
      wherein the artificial facet joint structure is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and  
15       wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

14. A prosthesis according to claim 1  
      wherein the artificial facet joint structure  
20      is adapted and configured to replace a natural articular process of a caudal portion of a natural facet joint, and  
          wherein the prosthesis body is adapted and configured to replace at least some of a pedicle of the  
          vertebral body.

25       15. A prosthesis according to claim 1  
          wherein the prosthesis body is adapted and configured to replace at least some of a lamina of the  
          vertebral body.

30       16. A prosthesis according to claim 1  
          wherein the prosthesis body is adapted and configured to replace at least some of a mamillary process of the vertebral body.

35       17. A prosthesis according to claim 1  
          wherein the prosthesis body is adapted and  
          configured to replace at least some of a pedicle of the

vertebral body.

18. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
is adapted and configured to articulate with a cephalad  
5 portion of a facet joint of an adjoining vertebral body.

19. A prosthesis according to claim 1  
wherein the artificial facet joint structure  
is made of at least one selected prosthetic material.

20. A prosthesis according to claim 1  
10 wherein the selected prosthetic material  
includes polyethylene, rubber, tantalum, titanium, chrome  
cobalt, surgical steel, bony in-growth material, ceramic,  
artificial bone, or a combination thereof.

21. A method of replacing, on a vertebral  
15 body, all or a portion of a caudal portion of a natural  
facet joint using the prosthesis defined in claim 1 to  
provide improved support for the spinal column, the  
method comprising the steps of

(i) removing all or a portion of a natural  
20 articular process of the caudal portion of the natural  
facet joint from the vertebral body, and

(ii) fixing the prosthesis as defined in claim  
1 to the vertebral body to replace the removed portion of  
the natural articular process with the artificial facet  
25 joint structure.

22. A method according to claim 21  
further including a step of removing at least  
some of the lamina from the vertebral body.

23. A method according to claim 21  
30 further including a step of removing at least  
part of a mamillary process from the vertebral body.

24. A method according to claim 21  
further including a step of removing at least  
part of a transverse process from the vertebral body.

35 25. A method according to claim 21

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further including a step of removing at least part of a pedicle from the vertebral body.